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REMARKS

Claims 1, 3-12 and 14-19 were pending in the application prior to this amendment. Claim 1 has been amended herein. Claims 3-12 and 14-19 remain in the application unchanged. Accordingly, after entry of this amendment, claims 1, 3-12 and 14-19 will remain pending in the application. Reexamination and reconsideration are requested.

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I. Title of the Invention

On page 2 of the final Office action, the Examiner indicates that applicants' new title of the invention is not descriptive and requires that a new title be presented. In response, applicants have amended the title herein to read as follows:

**IMAGING APPARATUS HAVING DISCONTINUOUS LENS
REFERENCE SURFACES AND METHOD OF ASSEMBLING THE
IMAGING APPARATUS**

It is believed that this amended title is adequately descriptive of the invention as currently claimed.

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II. 35 U.S.C. §103(a) Rejection of Claims 1, 3-12 and 14-19

Claims 1, 3-12 and 14-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ashe et al. (U.S. 6,178,016) in view of Harrigan et al. Reexamination and reconsideration of the Examiner's rejection are requested.

Claims 1 and 3-9

Applicants' claim 1, as amended herein, recites the following:

An imaging apparatus comprising:

an imaging apparatus housing, said imaging apparatus housing comprising at least one first reference surface and at least one second reference surface, said first and second reference surfaces being rigidly affixed to said housing;

wherein, said at least one first reference surface is coplanar with said at least one second reference surface;

wherein, said at least one first reference surface is discontinuous with said at least one second reference surface;

at least one lens assembly in contact with both said at least one first and at least one second reference surfaces;

a photosensor assembly;

wherein, said housing further includes at least one photosensor assembly reference surface; and

wherein, at least a portion of said photosensor assembly is in contact with said at least one photosensor assembly reference surface.

As noted below in Paragraph III, claim 1 has been amended herein, as

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indicated above, to correct an obvious error and improve antecedent basis.

Turning now to the 35 U.S.C. §103(a) rejection of claim 1, the Examiner states the following on pages 2-3 of the final Office action:

Ashe's first and second pressure pad reference surfaces, being spring biased, are not rigidly affixed to the housing as recited in independent claims 1 and 10.

...

It would have been obvious to one skilled in the art, at the time of the invention, to provide the imaging apparatus of Ashe with a different type of reference surface arrangement for supporting and aligning the lens assembly, such as the [rigidly] affixed, V-shaped, four surface configuration disclosed by Harrigan.

The Examiner, thus, takes the position that it would be obvious, in view of the teaching in Harrigan et al., to replace the spring-biased pads of Ashe et al. with rigidly-affixed pads. Applicants respectfully disagree with the Examiner's position because, as explained below, Ashe et al. teaches away from the use of rigidly-affixed reference surfaces.

With reference, for example, to Figs. 5 and 6 of Ashe et al., the pads in question are denoted by the reference numeral 105. The pads 105, in turn, are formed on flexible spring fingers 104. Ashe et al. discusses the pads 105 and spring fingers 104, for example, as follows:

Flexible spring fingers 104 with pressure pads 105 are molded into the lower collar segment 103 to temporarily hold the lens mount 78 in place until focusing alignment is completed, at which time the lens is permanently retained by adhesive injected through either one or both of the space bridging the spring fingers with the lens mount 78 and the lens adjustment slot 79a in the upper body portion 72, preferably the latter.

(Ashe et al., col. 5, lines 7-14)

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Ashe et al., thus, discusses resiliently-biased pads provided in order to hold the lens in place (against the lower surface of the upper body portion 72 - see, e.g., Fig. 5) during focusing. The importance of the resiliently-biased pads in the Ashe et al. device is further stressed by the following discussion of the design of the fingers 104:

The spring fingers 104 are sized such that the contact force, determined by the deflection after assembly of the fingers, is enough to hold the focusing lens assembly 76 in place during the assembly process and the yield stress of the material is not exceeded.

(Ashe et al., col. 5, lines 16-21)

Notably, Ashe et al. discusses above the importance of not exceeding the yield strength of the material from which the fingers 104 are formed, since beyond yield strength, a material is no longer resilient. Ashe et al., thus, stresses the importance of using resiliently-biased pads in order to hold the lens in place during focusing. For the reasons set forth above, applicants respectfully assert that Ashe et al. teaches away from the use of rigidly-affixed reference surfaces as recited in applicants' claim 1.

A reference which *teaches away* from the applicants' invention may not properly be used in framing a 35 U.S.C. 103 rejection of applicants' claims. See *United States v. Adams*, 148 USPQ 429 (Sup. Ct. 1966).

"A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant . . . [or] if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant." *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

As quoted in *Tec Air Inc. v. Denso Manufacturing Michigan Inc.*, 52

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USPQ2d 1294, 1298 (Fed. Cir. 1999)

The MPEP also discusses this concept:

It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 218 USPQ 769, 779 (Fed. Cir. 1983) (The claimed catalyst which contained both iron and an alkali metal was not suggested by the combination of a reference which taught the interchangeability of antimony and alkali metal with the same beneficial result, combined with a reference expressly excluding antimony from, and adding iron to, a catalyst.).

(MPEP 2145 X. D. 2.)

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)

(MPEP 2141.02, underlining in original)

Applicants further respectfully disagree with the proposed combination of Harrigan et al. and Ashe et al. because an inoperative device would result from the proposed combination. As discussed above, Ashe et al. discloses that resiliently-biased pads are critical to proper operation of the device (i.e., by providing sufficient contact force to hold the focusing lens assembly 76 in place during the assembly process). Accordingly, modifying the Ashe et al. device by replacing the Ashe et al. resiliently-biased pads with rigidly-mounted surfaces would result in an inoperative device.

If when combined, the references "would produce a seemingly inoperative device," then they teach away from their combination. *In re Spinnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969); see also *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (finding no suggestion to modify a prior art device where the modification would render the device inoperable for its

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intended purpose).

Tec Air Inc. v. Denso Manufacturing Michigan Inc., 52 USPQ2d 1294, 1298 (Fed. Cir. 1999)

... it is generally settled that the change in prior art device which makes the device inoperable for its intended purpose cannot be considered to be an obvious change. *Hughes Aircraft Co v. United States*, 215 U.S.P.Q. 787, 804 (Ct.Cl. Trial Div. 1982) modified (to affirm validity and reverse infringement holding), 717 F.2d 1351 [219 USPQ 473] (Fed. Cir. 1983).

As quoted in *Bausch & Lomb Inc. v. Barnes-Hind/Hydrocurve Inc.*, 10 USPQ2d 1929 (DC N.Cal. 1989)

For the reasons advanced above, applicants respectfully assert that claim 1 is allowable.

Claims 3-9 are allowable at least as depending from allowable base claim 1.

Claims 10-12 and 14-19

Claim 10 recites the following:

A method of assembling an imaging apparatus, said method comprising:

providing an imaging apparatus housing comprising at least one first reference surface and at least one second reference surface, said first and second reference surfaces being rigidly affixed to said housing;

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providing at least one lens;
wherein, said at least one first reference surface is coplanar with
said at least one second reference surface;
wherein, said at least one first reference surface is
discontinuous with said at least one second reference surface;
using said at least one first reference surface and said at least
one second reference surface to align said lens with said imaging
apparatus housing by contacting said lens with said at least one first
reference surface and said at least one second reference surface;
providing at least one photosensor assembly;
providing said housing with at least one photosensor assembly
reference surface; and
aligning said at least one photosensor assembly with said
housing by contacting at least a portion of said photosensor assembly
with said photosensor assembly reference surface.

Claim 10, thus, is believed to be allowable for at least the reasons
advanced above with respect to claim 1.

Claims 11, 12 and 14-19 are allowable at least as depending from
allowable base claim 10.

III. Amendment to Claim 1

Applicants have amended claim 1 herein to correct an obvious error.
Specifically, in applicants' last response (filed October 15, 2003), claim 1 was
amended to include the subject matter of dependent claim 2. When making
the amendment, however, the claim 2 language highlighted below was
inadvertently omitted:

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2. The imaging apparatus of claim 1 and further comprising:
a photosensor assembly;
wherein, said housing further includes at least one photosensor
assembly reference surface; and
wherein, at least a portion of said photosensor assembly is in
contact with said at least one photosensor assembly reference surface.

Accordingly the recitation "said photosensor assembly" in the
penultimate line of claim 1 lacks antecedent basis. The amendment to claim
1 presented herein simply adds the missing language "a photosensor
assembly" in order to provide the claim with improved antecedent basis.

If the Examiner does not intend to allow the application, then
applicants respectfully request that the amendment to claim 1 and the
amendment to the title be entered in order to reduce issues for purposes of
appeal.

For the reasons set forth above, applicants assert that all of the claims
are allowable.

Respectfully submitted,

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